



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/699,397	10/31/2003	Jason R. Brindel	9314-41	3313
7590 12/29/2005				
Elizabeth A. Stanek Myers Bigel Sibley & Sajovec Post Office Box 37428 Raleigh, NC 27428		EXAMINER VU, PHU		
		ART UNIT 2871 PAPER NUMBER		

DATE MAILED: 12/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/699,397

Applicant(s)

BRINDEL, JASON R.

Examiner

Phu Vu

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-35 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-34 is/are allowed.
- 6) ☒ Claim(s) 35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 1/27/05 5/20/2004
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_

### **DETAILED ACTION**

Applicant's arguments, with respect to the rejection(s) of claim(s) 1-34 U.S.C. 103(a) and claim 35 under 35 USC 102(b) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Kim regarding claim 35.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claim 35 is rejected under 35 U.S.C. 102(b) as being anticipated by Kim  
6750932.**

**Regarding claim 35**, Kim teaches a liquid crystal display with a purely transmissive mode and a purely reflective mode. Kim teaches a transfective display that operates in a transmissive and reflective mode (see abstract). The limitation of purely is interpreted broadly as although applicant's display allows more light in transmissive mode and reflects more light in reflective mode the limitation of "purely" would normally mean 100% efficiency in reflective and transmissive modes of operation. However if there are any losses associated in either mode ie. through heat absorption/reflection by the substrates absorption by the liquid crystal which must be the case than in applicant's invention than this limitation must be interpreted broadly as a significantly reflective and significantly transmissive. Thus if purely is not interpreted as

Art Unit: 2871

100% pure than the limitation of purely a range of arbitrary values as purely does not indicate any quantifiable characteristics when interpreted this way. Therefore, Kim's transfective display is considered operating in a purely reflective and purely transmissive mode.

***Allowable Subject Matter***

Claims 1-34 are allowed.

The following is an examiner's statement of reasons for allowance:

**Regarding claims 1-34**, there is no prior art of record that teaches a liquid crystal display comprising: a micro-electromechanical reflective array; and a plurality of plates associated with the micro-electromechanical reflective array, the plates being movable between the first mode of operation when the plurality of plates are in the first position and configured to operate in a second mode of operation when the plurality of plates are in the second position.

Little teaches a display with a micro-electromechanical reflective array; and a plurality of plates associated with the micro-electromechanical reflective array, the plates being movable between the first mode of operation when the plurality of plates are in the first position and configured to operate in a second mode of operation when the plurality of plates are in the second position however the display is not liquid crystal. Limitations in the preamble of a liquid crystal was given patentable weight as it does further define the structure of the claim to include at least a liquid crystal layer.

Minoura teaches a liquid crystal display with a micro-electromechanical reflector however this display is not a transfective display and Minoura's reflectors are used to

dynamically adjust the viewing angle range of the display during operation thus no motivation was found to combine Minoura's reflector with displays known in the art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

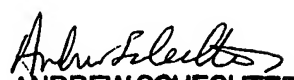
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phu Vu whose telephone number is (571)-272-1562.

The examiner can normally be reached on 8AM-5PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (571)-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PQV  
2871

  
ANDREW SCHECHTER  
PRIMARY EXAMINER